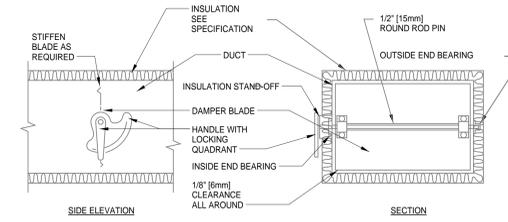
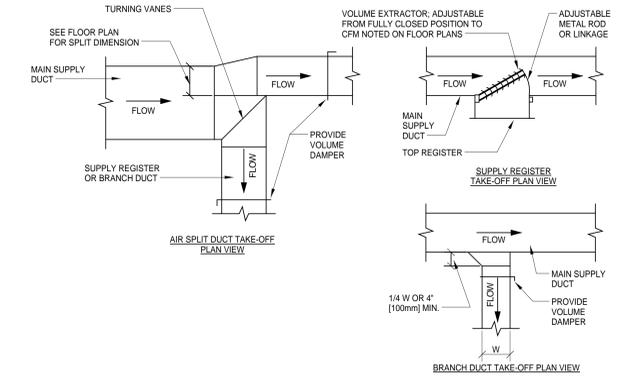


7 SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS
N.T.S.

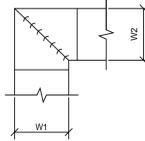


NOTE:
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

4 VOLUME DAMPER DETAIL
N.T.S.

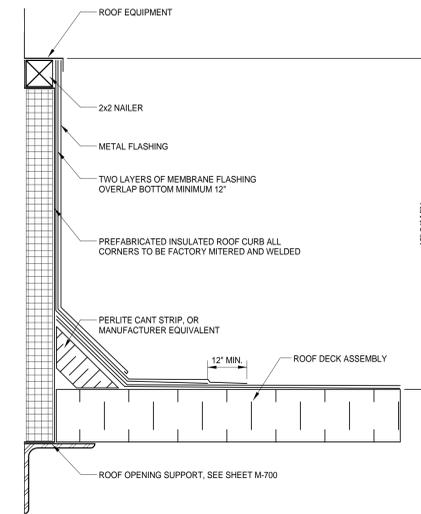


1 SUPPLY DUCTWORK TAKE-OFFS
N.T.S.

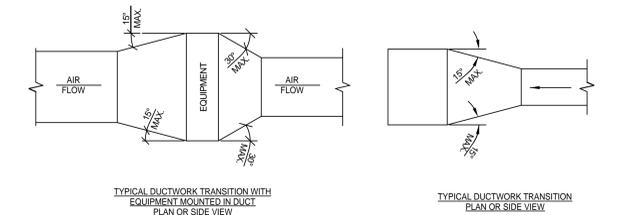


NOTE:
1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" (50MM) RADIUS, 1 1/2" (40MM) MAXIMUM SPACE BETWEEN VANES AND A 3/4" (20MM) TRAILING EDGE.
4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" (500MM) VANES SHALL BE DOUBLE VANE TYPE.

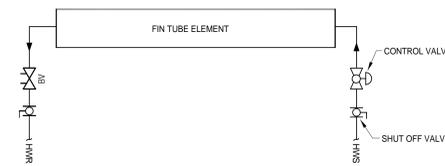
8 DUCTWORK SQUARE VANE ELBOWS
N.T.S.



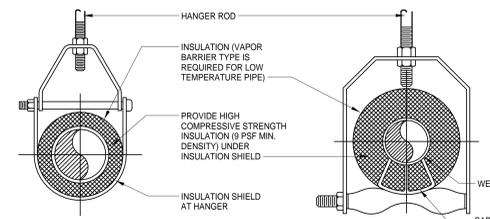
5 TYPICAL ROOF CURB DETAIL
N.T.S.



2 DUCTWORK TRANSITIONS (WITH EQUIPMENT MOUNTED IN DUCT)
N.T.S.



9 FIN TUBE ELEMENT - PIPING CONNECTIONS
N.T.S.



NOTES:
SEE SPECIFIER FOR DETAILED HANGER REQUIREMENTS



MAXIMUM PIPE/TUBING SUPPORT SPACING

NOM. SIZE	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24		
IN. (mm)	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	
THRU (20)	(25)	(32)	(40)	(50)	(63)	(75)	(100)	(125)	(150)	(200)	(250)	(300)	(350)	(400)	(450)	(600)	(600)		
PIPE FT. (mm)	7	7	7	8	9	10	11	12	14	16	17	19	22	23	25	27	28	30	32
TUBING FT. (mm)	5	6	7	8	8	8	9	10	12	13	14	16	16	-	-	-	-	-	-
	(1500)	(1600)	(2100)	(2400)	(2400)	(2700)	(3000)	(3700)	(4000)	(4100)	(4900)	(4900)	-	-	-	-	-	-	-

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

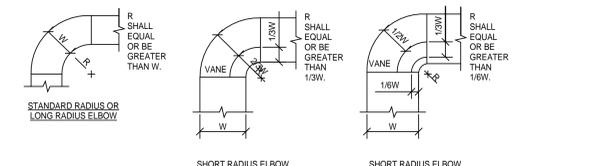
6 PIPE HANGERS
N.T.S.

HANGER STRAPS OR RODS

MAX. DUCT IN. (mm)	QUANTITY/SIZE IN. (mm)	MAX. LOAD LBS. (kg)	MAX. SPACING IN. (mm)
26 (650)	ONE 1 (25) x 22 GA STRAP	260 (119)	144 (3600)
36 (900)	ONE 1 (25) x 18 GA STRAP	420 (190)	144 (3600)
50 (1250)	ONE 1 (25) x 16 GA STRAP	700 (317)	144 (3600)
60 (1500)	TWO 3/8 (10) RODS	1320 (598)	144 (3600)
84 (2100)	TWO 1/2 (13) RODS	2500 (1133)	144 (3600)

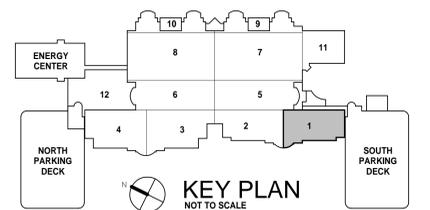
NOTE:
TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

10 ROUND DUCT HANGERS
N.T.S.



NOTE:
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

3 DUCTWORK RADIUS ELBOWS
N.T.S.



1		
2		
3		
4		
5		
Revisions:		Date

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File Name	Approved: Division Chief
File Location	Approved: Service Director

Project Title A3 SOUTH RENOVATION	Date 12/16/2014
Building Number 1	Project Number 553-14-100
Checked EJR	Drawn JCW
Location 4646 JOHN R. STREET DETROIT, MI 48201	Drawing Number M-501

Office of Facilities Management

Department of Veterans Affairs